Children's Health Defense › Defender › Vaccine Injury

Tylenol Use in Babies, Children Raises Risk of Autism, New Review Shows

By Julie Conlee, Ph.D.

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A review of the evidence on the drug acetaminophen (paracetamol, sold under the brand name Tylenol) and Paracetamol, and sounding the alarm about the use of the drug in infants, children and pregnant women during pregnancy and autism spectrum disorder (ASD).

The study shows Tylenol acetaminophen would never be approved for pediatric use by today's regulatory standards,[1] Dr. William Parker, of RPLab, Inc., who led the study, told *The Defender*. Parker is a pharmacologist and toxicologist.

"The data presented is safe for children in an assumption based on the fact many studies show it does not cause liver damage in children when used at an appropriate dose," said Parker.

Parker and his colleagues previously conducted a systematic review, published in September 2021 in the journal *Medicine*, that found a "consistent, dose-dependent association with a moderate risk of autism in the children did not examine the confounding role of the drug on neurodevelopment — even though the brain is one of the primary target organs for the drug's therapeutic effect."

Their latest review builds on their earlier work showing acetaminophen was not assessed for impact on neurodevelopment, and on the strong evidence that prenatal exposure to acetaminophen increases the risks of neurodevelopmental issues.

There is little research on the effect of prenatal exposure to acetaminophen.

However, according to the study, "consistent evidence" associates prenatal exposure to the drug in disorders, and includes at least three otherwise unexplained temporal relationships, data from laboratory animals, and several miscellaneous and otherwise unexplained correlations, and a lack of alternative causes that fit the evidence-based profile."

Based on this evidence, the authors "conclude that prenatal exposure to acetaminophen is a probable cause of neurodevelopmental disorders at risk is "impossible to rule out," the study says.

The risk factor: oxidative stress

The key to understanding the role of acetaminophen in ASD is that acetaminophen depletes the body's supply of glutathione, which happens in the presence of oxidative stress, according to Parker and his colleagues.

Oxidative stress is an imbalance of free radicals and antioxidants in the body that can lead to cell and tissue damage.

The body's cells produce free radicals during metabolism, the chemical reactions that produce energy in our cells. These free radicals cause damage to cells and contribute to chronic illnesses and the aging process.

Unlike many drugs, some of the acetaminophen an individual takes is converted by the liver to the highly toxic metabolite, N-acetyl-p-benzoquinone imine (NAPQI).

Usually, NAPQI is rapidly neutralized (rendered harmless) by glutathione, and because most healthy children have lots of glutathione, they aren't harmed by NAPQI.

However, under conditions of oxidative stress, glutathione is depleted so the drug is not neutralized, leaving NAPQI to cause damage to cells, interacting with a wide range of proteins, causing permanent damage to the proteins and associated cells.

Many babies and children are exposed to excessive oxidative stress through a variety of environmental and genetic factors including infection, treatment with antibiotics, vaccination, psychological stress, jaundice, heavy metals, problems with vitamin B metabolism, ENT exposure, exposure to cigarette smoke or air pollution and exposure to organophosphates.

How likely a child is to be injured by acetaminophen depends in part on the amount of oxidative stress present when the child takes acetaminophen and the amount of the drug administered to the child.

According to the authors of the review, understanding the role of oxidative stress in combination with acetaminophen contributes to our understanding of the disparate risk factors for ASD. They are not mutually exclusive.

When a child develops a fever after receiving a vaccine, "acetaminophen is overwhelmingly administered to treat the fever," Parker said. "Vaccines are one of the primary sources for the mass use of acetaminophen, which increases the risks of developing ASD, according to Parker.

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First indication that acetaminophen might be associated with ASD

Parker told *The Defender* the first indication that acetaminophen might have a negative impact on neurodevelopment came from the work of Dr. Stephen Levine, a psychologist at the University of Toronto, who in 2010 published a childhood vaccination followed by giving the child acetaminophen.

After his son's "brave child" was autism, Schultz left his established dentistry practice and went on a journey to find out what happened to his child, earning a Ph.D. in the process.

In 2008, Schultz and a number of distinguished scientists, then at the University of California, San Diego and at San Diego State University, published a small survey study that found a six-fold increased risk of ASD in 5- to 10-year-old children when routine childhood vaccines were given with acetaminophen.

"Unfortunately," Parker said, "Schultz's study was ignored for almost a decade." The study was criticized for being small.

Parker conceded a study like this, taken in isolation, does not seem persuasive. However, he said, it should be considered as just one piece of the puzzle in terms of what is causing the dramatic increase in ASD.

As Jennifer Margulis, Ph.D., wrote in her "Locust Lens" on Parker's paper, "in a nutshell, it's impossible to see a big picture with a scientific microscope."

A narrative review of the evidence

The goal of Parker's latest study was to pull together the many pieces of evidence to see if a narrative could be understood the big picture.

The study is a narrative review that presents the 17 lines of evidence suggesting acetaminophen is associated with ASD and examines the alternative explanations.

Highlights from the review include:

- **Acetaminophen use in pregnancy is neurotoxic to babies**, with long-term effects that include lower IQ, increased ASD and increased ADHD. The study concludes if babies can be harmed by acetaminophen in utero, it's unreasonable to think they couldn't also be harmed by the drug after birth.
- **Babies with colic and mice showed acetaminophen causes long-term brain damage** and this early exposure to the drug was also linked to a risk of ASD even less than doses received by human babies and children. An alternative study in mice found that a dose of acetaminophen that is comparable to what human babies receive at the earliest stage of life that the animals are alive, this remodeled neurons, such as the heavy metal lead and the pesticide DDT.
- **The incidence of ASD began to increase in the early 1990s**, coinciding with the increasing use of acetaminophen in infants and children. The resulting switch from using aspirin in children to using acetaminophen.

The authors argue this was not a coincidence.

- **The incidence of ASD steadily increased in the U.S.**, after the U.S. Food and Drug Administration approved infant liquid Tylenol for use in children younger in 1997. That, and other factors, may have increased the use of pharmaceutical products.
- **The circumcision of baby boys is associated with a dramatic increase (30%)** in the risk for early-onset ASD. Acetaminophen is frequently used to relieve pain caused by circumcision.
- **The combination of the measles-mumps-rubella (MMR) vaccine with the use of acetaminophen is** associated with higher rates of ASD than **MMR vaccination alone**. "Many parents believe that their children's ASD was induced by a vaccine based on their own observations or the observations of online or social networks."

However, the authors argue the vaccination caused oxidative stress. The subsequent administration of acetaminophen — not the vaccine — then triggered the ASD.

- **People with Leaky Guts, which are usually efficient at metabolizing acetaminophen, have a** low incidence of ASD.

- **In South Korea, where acetaminophen-containing products were withdrawn from the market between 2011 and 2014 due to a dosage** error, researchers found an unexpected high percentage of ASD.

What can parents do instead? Alternatives to acetaminophen

What will it take to change the authorization of acetaminophen as a first line of defense in fever lowering on the drug?

Parker contended the FDA, but said, "The way the risk was turned with aspirin and Reye's Syndrome was through grassroots efforts."

In the meantime, the narrative review by Parker and his colleagues is there for parents and caregivers who want to reduce the risks of autism and disorders in themselves if acetaminophen is worth the risk for babies and young children.

To my experience, with very rare exceptions, parents are aware of the available evidence and avoid giving acetaminophen to their babies and children," said Parker.

Unlike some parental causes of autism, acetaminophen is one risk factor that parents, caregivers and physicians can eliminate with ease, Parker said.

For parents looking for alternatives to fevers in children, Parker recommended the "Treating a Fever Without Medicine" resource from the American Academy of Pediatrics, with tips such as offering plenty of fluids and sponging the child.

Margulis suggested a range of natural remedies to treat pain and fevers in children.

Updated: This article was updated to state that the authors are sounding the alarm about the use of Tylenol in infants and children, but did not call for immediate action.

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Julie Conlee is a freelance science reporter for The Defender.

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Mary Holland • 2 days ago
Thank you for this article. Parker's conclusion: Acetaminophen is not the cause in my son's case. It is directly related to the flu vaccine.
1 ^ | Reply | Share

Wendy Allen • 2 days ago
Tylenol was given to my son at birth ... and now a higher dose.
https://www.chadwickmedia...
1 ^ | Reply | Share

Truthseer • 2 days ago
Yes, it's the flu shot. But, time the former classes is the flu 80s and earlier taking the over the chemical industry is ending to blame. Chemicals in the classics Tylenol, Tylenol, Acts. A of Shots Don't start have to be tolerated. Corrupt profits and evil Tylenol, Tylenol, Acts. A of Shots Don't start have to be tolerated. Corrupt profits and evil
1 ^ | Reply | Share

Caroline Cary Davidson • 2 days ago
Um, all autism is attributable to both Tylenol AND flu shots. It is not cause and every case is attributable, otherwise, of course but not individual. Just another example of why the "science" is not settled and why we should not be forced to take it.
1 ^ | Reply | Share

Beatrice • 2 months ago • Edited
That's so true! Caroline and so is the science correlation isn't causation.
1 ^ | Reply | Share

Mark Gaynor • 2 days ago
Sounds like a cover up story to hide the real danger of vaccines.
1 ^ | Reply | Share

Judith • 2 days ago
Tylenol was given to me accidentally IMMEDIATELY after my giving them test while when both instead of Bayer aspirin (half a regime), while unless both without the other chemicals in regular aspirin would be a better choice than any MMRII. Any family with an autistic person should be suing Johnson & Johnson. Tylenol is the name to go to in court today. The reason is out of remedies who have autism in the family.
1 ^ | Reply | Share

Kathryn • 2 days ago
Please consider singling and sharing the Change .org petition to get Acetaminophen removed from children's medicine. Sign the petition: https://chng.it/TPHVHqdP
1 ^ | Reply | Share

Gary Brown • 2 days ago
Tylenol is Acetaminophen Aluminum in Human Brain Tissues in Autism and Multiple Sclerosis by Matthew Mead, United Kingdom

1 ^ | Reply | Share

Mary B • 2 days ago • Edited
How do you remove aluminum from the brain?
1 ^ | Reply | Share

Jenelle • 2 days ago
Aluminum is in every baby food and every baby shot. I lost NOT ot 1 Tylenol in my entire years nursing to the baby shot. I got it on the shot! It is remember names & some specifics I found myself slowly dyslexia 21-18 months after the shot. I got it on the shot! It is remember names & some specifics I found myself slowly dyslexia 21-18 months after the shot. Aluminum is a strong element, toxic dose, causes death, neurotoxic dose, causes death, neurotoxic dose, causes death, neuroto